

Mississippi Valley Conference (MVC)

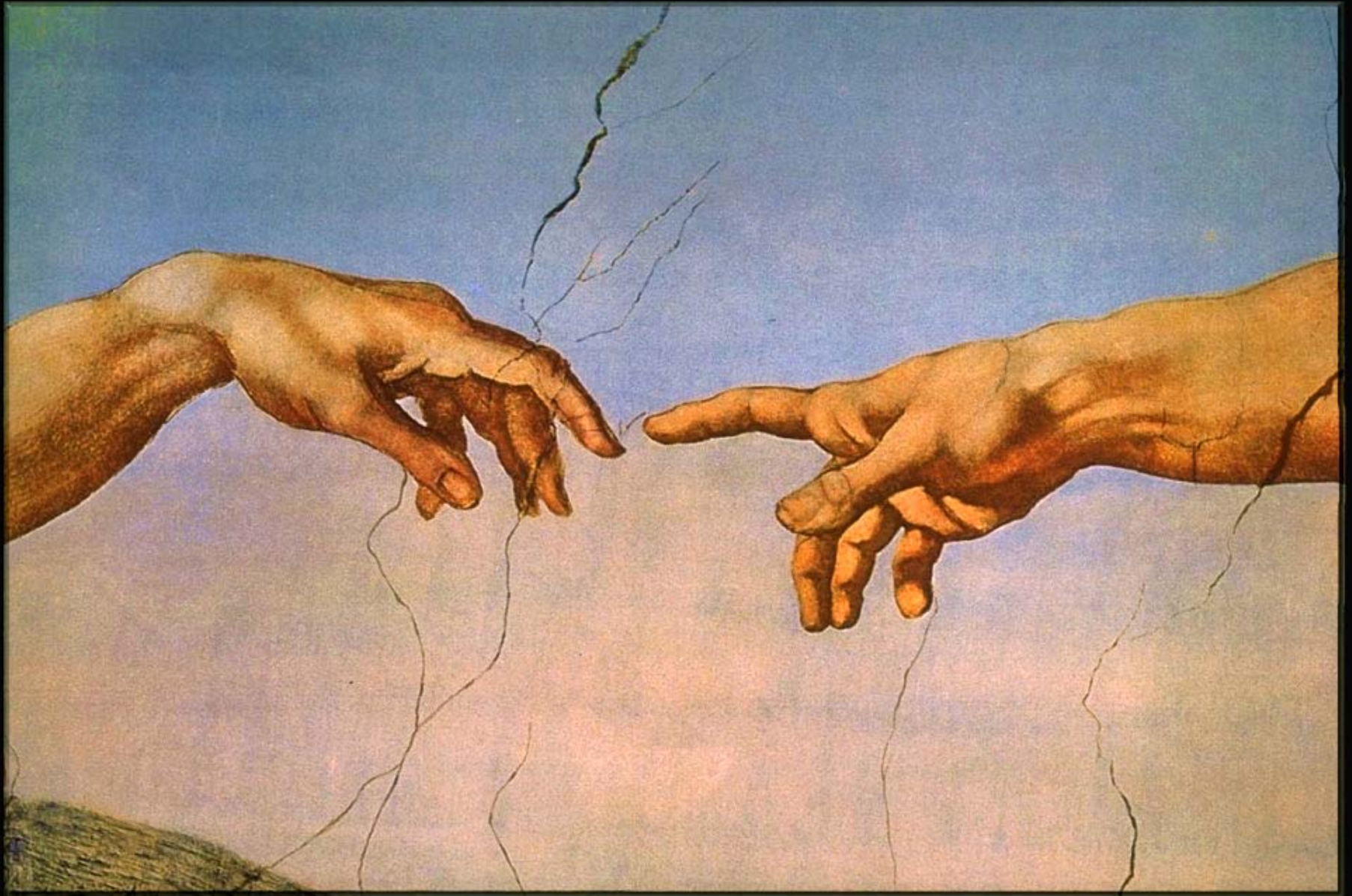
Funding Decisions – A True Work of “ART”

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Deputy State Highway Engineer

July 2005





'THE CREATION' - MICHELANGELO



'FISHING IN SPRING' - VINCENT VAN GOGH



What is ART?

Authorization Review Team



Who is ART?

ART Members:

- ❖ **Commissioner of Highways**
- ❖ **KYTC Budget Director**
- ❖ **State Highway Engineer**
- ❖ **Deputy State Highway Engineers**

What does ART do?

❖ **Meets monthly to:**

- **Refine Road Fund revenue projections**
- **Determine if bills can be paid**
- **Determine if “mods” and “change orders” can be covered**
- **Determine if new project authorizations can be permitted**

TRANSPORTATION
Revolution
5 Mississippi Valley
Conference

Bringing the Program into focus....



Some of the ART-ist's tools:

❖ Revenues

- Revenue Forecasting Group
- Internal Budget Analysis
- Comparisons with prior-year revenues

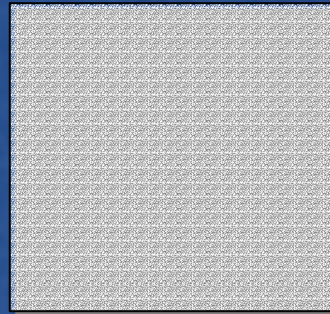
❖ Expenditures

- Examination of past spending patterns
- Six Year Plan vs. "Fixed Budget Items"
- Individual Project Payouts

The ART-ist's Concept:

- ❖ Paint the revenue “backdrop”
- ❖ Capture the “fixed objects”
- ❖ Detail the ART-work with the ebb and flow of permissible State Project (SP) Authorizations

**What does the
finished product
look like?**



<div>Clear All</div> <div>Get Sheets</div> <div>Setup Print</div> <div>Update Now</div> <div>- Less Detail</div> <div>+ More Detail</div>		TRANSPORTATION CABINET CASH MANAGEMENT PLAN MONTHLY REPORT (Numbers are millions)												
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Actuals through: May,2005		Actual Jul-04	Actual Aug-04	Actual Sep-04	Actual Oct-04	Actual Nov-04	Actual Dec-04	Actual Jan-05	Actual Feb-05	Actual Mar-05	Actual Apr-05	Actual May-05	Projected Jun-05	F.Y.2005 Totals
Cash Resources:														
Road Fund Beginning Balance		163.20	184.74	180.03	193.39	195.80	223.70	208.30	233.90	237.80	295.30	309.00	341.90	2,767.06
Federal Fund Beginning Balance		(33.90)	(44.90)	(29.90)	(26.10)	(29.02)	(28.30)	(31.00)	(27.80)	(32.70)	(34.30)	(39.70)	(43.30)	(400.92)
Beginning Balance		129.30	139.84	150.13	167.29	166.78	195.40	177.30	206.10	205.10	261.00	269.30	298.60	2,366.14
Road Fund Receipts		87.95	108.47	89.58	84.19	94.29	78.22	90.35	82.60	112.43	99.09	104.59	87.93	1,119.70
Federal Fund Receipts		17.60	61.50	45.40	43.30	38.42	42.45	20.55	27.00	38.00	32.12	38.50	63.92	468.76
Total Receipts		105.55	169.97	134.98	127.49	132.71	120.67	110.90	109.60	150.43	131.21	143.09	151.85	1,588.46
Total Available Cash		234.85	309.81	285.11	294.78	299.49	316.07	288.20	315.70	355.53	392.21	412.39	450.45	3,954.60
Expenditures:														
Non-Six-Year-Plan Expenditures:														
Other Construction		(2.61)	(4.69)	(2.33)	(2.69)	(5.02)	(4.19)	(5.54)	(1.82)	(1.06)	(1.16)	(2.86)	(5.03)	(39.00)
Maintenance		(16.59)	19.08	(21.93)	(19.79)	(20.36)	(21.76)	(25.15)	(21.00)	(20.89)	(20.89)	(22.08)	(24.52)	(215.88)
Revenue Sharing		(4.72)	(85.38)	(20.72)	(14.44)	(10.63)	(5.93)	(7.02)	(34.48)	(5.16)	(13.76)	(7.66)	(13.51)	(223.42)
Statewide Resurfacing		(1.03)	(1.75)	(1.65)	(1.72)	(0.80)	(0.37)	(0.01)	(0.34)	(5.05)	(7.52)	(12.32)	(20.56)	(53.11)
Debt Service		0.00	0.00	0.00	0.00	(0.19)	(19.77)	0.00	0.00	0.00	0.00	(0.10)	(82.30)	(102.36)
Vehicle Regulations		(1.77)	(1.57)	(0.97)	(1.48)	(0.97)	(1.42)	(1.42)	(1.49)	(1.18)	(1.49)	(1.00)	(1.50)	(16.26)
Highways and General Administration		(5.88)	(7.97)	(4.35)	(13.45)	(5.66)	(6.68)	(10.28)	(6.21)	(6.56)	(10.02)	(8.03)	(11.17)	(96.28)
Capital Construction		0.00	(1.06)	0.00	(1.06)	0.00	(1.06)	0.00	0.00	0.00	(3.06)	(1.00)	(6.55)	(13.79)
Other State Agencies, and Judgments		(0.71)	(7.16)	(1.96)	(5.60)	(2.85)	(9.41)	(7.66)	(3.40)	(1.27)	(14.39)	(1.06)	(3.36)	(58.82)
Total Non-6YP Expenditures		(33.31)	(90.51)	(53.90)	(60.24)	(46.48)	(70.60)	(57.08)	(68.73)	(41.17)	(72.29)	(56.11)	(168.50)	(818.91)
Previously Authorized Projects:														
State Funded Expenditures		(20.10)	(17.08)	(17.54)	(16.44)	(15.03)	(13.94)	(5.69)	(6.18)	(10.66)	(10.10)	(12.87)	(16.16)	(161.79)
State Funded Federal Match Expenditures		(13.00)	(5.60)	(4.78)	(5.11)	(4.64)	(9.40)	(1.65)	(3.80)	(3.10)	(3.00)	(2.71)	(8.16)	(64.95)
Federal Funded Expenditures		(28.60)	(46.50)	(41.60)	(46.22)	(37.78)	(44.83)	(17.68)	(31.90)	(39.60)	(37.52)	(42.10)	(45.51)	(459.84)
Modification Contingency		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.33)	(0.33)
Total Project Expenditures		(61.70)	(69.18)	(63.92)	(67.77)	(57.45)	(68.17)	(25.02)	(41.88)	(53.36)	(50.62)	(57.68)	(70.15)	(686.90)
Total Expenditures		(95.01)	(159.69)	(117.82)	(128.01)	(103.93)	(138.77)	(82.10)	(110.61)	(94.53)	(122.91)	(113.79)	(238.65)	(1,505.82)
Ending Available Cash Balances:														
Road Fund		184.74	180.03	193.39	195.80	223.94	207.98	234.23	237.80	295.30	309.00	341.90	236.69	2,840.78
Federal Fund		(44.90)	(29.90)	(26.10)	(29.02)	(28.38)	(30.68)	(28.13)	(32.70)	(34.30)	(39.70)	(43.30)	(24.89)	(392.00)
Revised Net Available Cash Balance		139.84	150.13	167.29	166.78	195.56	177.30	206.10	205.10	261.00	269.30	298.60	211.80	2,448.78
Notes:														
1) The Maintenance, Revenue Sharing and Resurfacing Programs have been adjusted in June so that they no longer reflect balloon expenditures to keep with their respective FY05 spending authority.														

TRANSPORTATION CABINET CASH MANAGEMENT PLAN

MONTHLY REPORT

(Numbers are millions)



Projected Jul-05	Projected Aug-05	Projected Sep-05	Projected Oct-05	Projected Nov-05	Projected Dec-05	Projected Jan-06	Projected Feb-06	Projected Mar-06	Projected Apr-06	Projected May-06	Projected Jun-06	F.Y.2006 Totals
236.69	261.30	165.81	154.27	150.36	163.95	144.68	171.10	200.85	212.43	247.64	293.74	2,402.82
(24.89)	(36.16)	(37.49)	(38.94)	(44.83)	(44.49)	(40.69)	(36.26)	(35.60)	(35.58)	(36.38)	(38.99)	(450.31)
211.80	225.14	128.32	115.33	105.52	119.46	103.99	134.84	165.25	176.85	211.27	254.75	1,952.51
89.49	116.37	85.88	98.08	100.15	79.93	95.31	90.28	96.65	102.58	108.61	100.91	1,164.25
42.63	59.26	54.48	57.61	59.96	47.95	33.59	33.57	33.29	35.43	46.12	46.60	550.50
132.12	175.63	140.36	155.70	160.11	127.88	128.90	123.85	129.94	138.02	154.74	147.51	1,714.75
343.92	400.78	268.68	271.03	265.63	247.34	232.89	258.69	295.19	314.86	366.00	402.26	3,667.26
(2.34)	(3.02)	(2.85)	(2.95)	(5.30)	(6.26)	(9.15)	0.37	(2.18)	(0.79)	0.26	(3.56)	(37.74)
27.57	(49.12)	(20.77)	(26.64)	(28.46)	(22.41)	(22.28)	(23.93)	(22.21)	(22.56)	(22.84)	(36.11)	(269.78)
(20.66)	(90.55)	(21.95)	(16.16)	(14.10)	(9.63)	(7.61)	(9.33)	(27.63)	(11.43)	(6.03)	(11.51)	(246.57)
(33.37)	(27.72)	(11.72)	(10.68)	(6.03)	(1.10)	(0.52)	(0.35)	(0.33)	(0.22)	(0.88)	(1.29)	(94.22)
0.00	(4.79)	0.00	0.00	0.00	(22.69)	0.00	(3.33)	0.00	0.00	0.00	(119.25)	(150.05)
(1.06)	(1.31)	(1.30)	(2.04)	(1.19)	(1.71)	(1.16)	(1.40)	(1.54)	(1.03)	(1.39)	(1.40)	(16.54)
(8.36)	(7.46)	(4.29)	(16.32)	(6.96)	(6.57)	(10.54)	(7.36)	(7.43)	(13.56)	(7.88)	(9.47)	(106.21)
(1.06)	0.00	0.00	(1.06)	0.00	0.00	(1.06)	0.00	0.00	(1.06)	0.00	0.00	(4.25)
(1.95)	(1.32)	(8.84)	(1.35)	(1.32)	(11.12)	(1.35)	(1.32)	(8.40)	(1.35)	(1.32)	(9.08)	(48.70)
(41.23)	(185.27)	(71.71)	(77.20)	(63.36)	(81.49)	(53.68)	(46.65)	(69.72)	(51.98)	(40.07)	(191.67)	(974.05)
(15.21)	(17.43)	(17.23)	(15.96)	(14.17)	(10.42)	(9.70)	(8.25)	(9.57)	(8.91)	(14.56)	(11.69)	(153.09)
(6.32)	(7.04)	(6.36)	(6.31)	(6.17)	(4.46)	(2.62)	(2.74)	(2.86)	(3.11)	(4.47)	(4.43)	(56.87)
(51.69)	(60.60)	(55.93)	(60.71)	(59.71)	(43.67)	(29.77)	(32.97)	(33.47)	(36.35)	(48.92)	(45.14)	(558.92)
0.00	0.00	0.00	(0.35)	(0.67)	(0.67)	(0.82)	(0.82)	(0.81)	(1.26)	(1.30)	(1.51)	(8.21)
(73.22)	(85.06)	(79.52)	(83.33)	(80.71)	(59.22)	(42.90)	(44.77)	(46.71)	(49.62)	(69.25)	(62.77)	(777.09)
(114.45)	(270.34)	(151.23)	(160.53)	(144.08)	(140.71)	(96.58)	(91.43)	(116.43)	(101.60)	(109.32)	(254.45)	(1,751.14)
261.30	165.81	154.27	150.36	163.95	144.68	171.10	200.85	212.43	247.64	293.74	183.27	2,349.40
(36.16)	(37.49)	(38.94)	(44.83)	(44.49)	(40.69)	(36.26)	(35.60)	(35.58)	(36.38)	(38.99)	(37.14)	(462.57)
225.14	128.32	115.33	105.52	119.46	103.99	134.84	165.25	176.85	211.27	254.75	146.13	1,886.84

TRANSPORTATION CABINET CASH MANAGEMENT PLAN
MONTHLY REPORT
(Numbers are millions)



Projected Jul-06	Projected Aug-06	Projected Sep-06	Projected Oct-06	Projected Nov-06	Projected Dec-06	Projected Jan-07	Projected Feb-07	Projected Mar-07	Projected Apr-07	Projected May-07	Projected Jun-07	F.Y.2007 Totals
183.27	226.16	168.13	164.99	168.27	192.30	184.61	215.09	249.56	269.23	310.47	365.54	2,697.63
(37.14)	(23.02)	(23.21)	(20.83)	(19.20)	(18.02)	(15.78)	(13.27)	(13.49)	(13.68)	(13.29)	(14.07)	(224.98)
146.13	203.15	144.93	144.17	149.07	174.27	168.83	201.83	236.08	255.55	297.18	351.48	2,472.65
90.51	114.69	84.44	96.59	100.79	80.59	96.12	90.51	97.87	104.06	109.32	102.42	1,167.90
42.61	35.61	32.24	31.04	29.22	20.83	12.49	12.46	12.96	14.34	19.95	19.36	283.12
133.12	150.29	116.68	127.62	130.01	101.42	108.61	102.98	110.83	118.40	129.26	121.79	1,451.02
279.25	353.44	261.60	271.79	279.08	275.69	277.44	304.80	346.91	373.95	426.45	473.26	3,923.67
(2.34)	(3.02)	(2.85)	(2.95)	(5.30)	(6.26)	(9.15)	0.37	(2.18)	(0.79)	0.26	(3.56)	(37.74)
28.96	(25.84)	(21.81)	(27.98)	(29.89)	(23.54)	(23.40)	(25.14)	(23.33)	(23.70)	(23.99)	(37.93)	(257.60)
(19.13)	(83.87)	(20.33)	(14.96)	(13.06)	(8.92)	(7.05)	(8.64)	(25.59)	(10.58)	(5.58)	(10.66)	(228.40)
(23.60)	(18.29)	(11.03)	(8.17)	(3.80)	(1.04)	(0.49)	(0.33)	(0.31)	(0.21)	(0.82)	(1.21)	(69.30)
0.00	(12.06)	0.00	0.00	0.00	(18.31)	0.00	(3.19)	0.00	0.00	0.00	(110.82)	(144.39)
(1.04)	(1.30)	(1.28)	(2.05)	(1.17)	(1.71)	(1.14)	(1.39)	(1.53)	(1.01)	(1.38)	(1.39)	(16.40)
(9.05)	(8.12)	(4.89)	(17.17)	(7.11)	(6.71)	(10.76)	(7.51)	(7.59)	(13.16)	(7.37)	(8.99)	(108.40)
(2.50)	0.00	0.00	(2.50)	0.00	0.00	(2.50)	0.00	0.00	(2.50)	0.00	0.00	(10.00)
(1.80)	(1.21)	(8.15)	(1.25)	(1.21)	(10.25)	(1.25)	(1.21)	(7.74)	(1.24)	(1.21)	(8.38)	(44.90)
(30.50)	(153.72)	(70.34)	(77.02)	(61.54)	(76.73)	(55.74)	(47.05)	(68.28)	(53.17)	(40.09)	(182.94)	(917.13)
(10.78)	(12.18)	(10.88)	(9.93)	(8.84)	(6.21)	(5.74)	(4.75)	(5.62)	(5.18)	(8.86)	(6.76)	(95.73)
(3.56)	(4.05)	(3.63)	(3.59)	(3.51)	(2.46)	(1.34)	(1.42)	(1.50)	(1.65)	(2.48)	(2.46)	(31.65)
(30.98)	(35.97)	(30.01)	(29.68)	(28.02)	(18.65)	(10.14)	(12.77)	(13.14)	(13.98)	(20.78)	(18.96)	(263.07)
(1.99)	(1.98)	(2.01)	(2.06)	(2.15)	(2.15)	(2.16)	(2.16)	(2.16)	(2.18)	(2.18)	(2.18)	(25.36)
(47.31)	(54.18)	(46.53)	(45.26)	(42.52)	(29.48)	(19.38)	(21.10)	(22.42)	(22.98)	(34.30)	(30.35)	(415.81)
(77.81)	(207.90)	(116.87)	(122.29)	(104.06)	(106.21)	(75.11)	(68.16)	(90.70)	(76.16)	(74.40)	(213.29)	(1,332.94)
226.16	168.13	164.99	168.27	192.30	184.61	215.09	249.56	269.23	310.47	365.54	273.01	2,787.37
(23.02)	(23.21)	(20.83)	(19.20)	(18.02)	(15.78)	(13.27)	(13.49)	(13.68)	(13.29)	(14.07)	(13.64)	(201.48)
203.15	144.93	144.17	149.07	174.27	168.83	201.83	236.08	255.55	297.18	351.48	259.37	2,585.90

TRANSPORTATION CABINET CASH MANAGEMENT PLAN
MONTHLY REPORT
(Numbers are millions)



Projected Jul-07	Projected Aug-07	Projected Sep-07	Projected Oct-07	Projected Nov-07	Projected Dec-07	Projected Jan-08	Projected Feb-08	Projected Mar-08	Projected Apr-08	Projected May-08	Projected Jun-08	F.Y.2008 Totals
273.01 (13.64)	325.33 (12.15)	273.53 (12.18)	276.82 (11.36)	286.50 (11.20)	316.58 (11.00)	316.43 (9.60)	351.81 (8.54)	390.40 (8.83)	414.23 (8.53)	460.38 (8.61)	521.65 (9.28)	4,206.67 (124.92)
259.37	313.18	261.36	265.46	275.30	305.58	306.83	343.27	381.57	405.70	451.76	512.37	4,081.75
92.76 17.41	117.54 18.79	86.54 16.73	98.98 16.57	103.29 16.14	82.59 11.55	98.50 6.39	92.76 6.74	100.30 7.12	106.64 7.61	112.03 11.37	104.97 11.16	1,196.90 147.56
110.17	136.32	103.26	115.55	119.43	94.14	104.90	99.50	107.42	114.25	123.40	116.12	1,344.46
369.54	449.50	364.62	381.01	394.73	399.72	411.73	442.77	489.00	519.95	575.16	628.49	5,426.21
(2.34)	(3.02)	(2.85)	(2.95)	(5.30)	(6.26)	(9.15)	0.37	(2.18)	(0.79)	0.26	(3.56)	(37.74)
30.39	(27.12)	(22.90)	(29.37)	(31.38)	(24.71)	(24.57)	(26.39)	(24.49)	(24.87)	(25.18)	(39.81)	(270.40)
(19.50)	(85.49)	(20.72)	(15.25)	(13.32)	(9.09)	(7.19)	(8.81)	(26.09)	(10.79)	(5.69)	(10.87)	(232.80)
(24.32)	(18.85)	(11.36)	(8.41)	(3.91)	(1.07)	(0.51)	(0.34)	(0.32)	(0.21)	(0.85)	(1.25)	(71.40)
0.00	(12.19)	0.00	0.00	0.00	(15.44)	0.00	(2.97)	0.00	0.00	0.00	(115.89)	(146.49)
(1.07)	(1.34)	(1.32)	(2.11)	(1.21)	(1.76)	(1.18)	(1.44)	(1.58)	(1.04)	(1.42)	(1.43)	(16.90)
(9.23)	(8.28)	(4.99)	(17.52)	(7.25)	(6.84)	(10.97)	(7.66)	(7.74)	(13.42)	(7.52)	(9.17)	(110.60)
(2.00)	0.00	0.00	(2.00)	0.00	0.00	(2.00)	0.00	0.00	(2.00)	0.00	0.00	(8.00)
(1.80)	(1.21)	(8.15)	(1.25)	(1.21)	(10.25)	(1.25)	(1.21)	(7.74)	(1.24)	(1.21)	(8.38)	(44.90)
(29.86)	(157.50)	(72.29)	(78.86)	(63.57)	(75.42)	(56.80)	(48.45)	(70.14)	(54.36)	(41.61)	(190.36)	(939.23)
(6.23)	(7.18)	(6.57)	(6.08)	(5.29)	(3.62)	(3.30)	(2.64)	(3.22)	(2.93)	(5.43)	(4.42)	(56.90)
(2.17)	(2.47)	(2.22)	(2.20)	(2.14)	(1.50)	(0.82)	(0.87)	(0.92)	(1.01)	(1.52)	(1.50)	(19.33)
(15.96)	(19.01)	(15.94)	(16.42)	(15.94)	(10.16)	(5.32)	(7.00)	(6.87)	(7.72)	(12.02)	(10.77)	(143.13)
(2.18)	(2.17)	(2.17)	(2.17)	(2.18)	(2.18)	(2.18)	(2.18)	(2.18)	(2.18)	(2.18)	(2.18)	(26.13)
(26.54)	(30.83)	(26.90)	(26.86)	(25.56)	(17.46)	(11.62)	(12.70)	(13.19)	(13.83)	(21.14)	(18.87)	(245.49)
(56.40)	(188.34)	(99.19)	(105.72)	(89.13)	(92.87)	(68.42)	(61.15)	(83.33)	(68.19)	(62.75)	(209.23)	(1,184.71)
325.33 (12.15)	273.53 (12.18)	276.82 (11.36)	286.50 (11.20)	316.58 (11.00)	316.43 (9.60)	351.81 (8.54)	390.40 (8.83)	414.23 (8.53)	460.38 (8.61)	521.65 (9.28)	428.14 (8.85)	4,361.80 (120.13)
313.18	261.36	265.46	275.30	305.58	306.83	343.27	381.57	405.70	451.76	512.37	419.28	4,241.66

The ART Objective?

In This Order,

- (1) Pay the bills**
- (2) Cover mods & change orders**
- (3) Add new State Projects, if
money left from (1) and (2)**

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What's the ART-ist's MOOD?

- ❖ Thankful for surviving the Starving Artist's Sale
- ❖ Excited about the chance to paint a vibrant future



Bottom Line: As we execute
our highway program, we are
creative within our means.

Our successes will truly be a
“Work of ART”...

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Mississippi Valley Conference (MVC)

Funding Decisions – A True Work of “ART”

Mike Hancock, P.E.

Deputy State Highway Engineer

July 2005



CASH FORECASTING

Minnesota Department of Transportation

Scott Peterson

July 2005

Need for Cash Forecasting

- ❖ **Large statewide construction initiative funded with bonds and Advance Construction (AC) financing**
- ❖ **Lack of Federal reauthorization increased reliance on AC funding and delayed federal aid reimbursements**
- ❖ **Accelerated cash payouts for “Design/Build” projects**

Cash Forecasting Objectives

- ❖ **Provide information to support revenue forecasts**
- ❖ **Ensure sufficient cash & fund balances are maintained to keep projects on schedule**
- ❖ **Manage AC balance to ensure impact on cash is “affordable”**
- ❖ **Forecast cash far enough into the future so that corrective measures will be effective**

Revenues

❖ **State Revenue** (approx 70% of total)

- Motor Fuel Tax, Vehicle Registration, Vehicle Sales Tax, Drivers Licenses, Bonding
- Have declined vs. budget forecasts

❖ **Federal Revenue** (approx 30% of total)

- Received on a reimbursable basis
- Lack of Federal Reauthorization limits ability to predict/request reimbursements

Expenditures

❖ **Construction Program** (approx 70 % of total)

- Highly seasonal and long-term in nature; payouts can spread out over 3-4 years or more
- Cash Forecast System predicts based on project cost estimates and payment curves

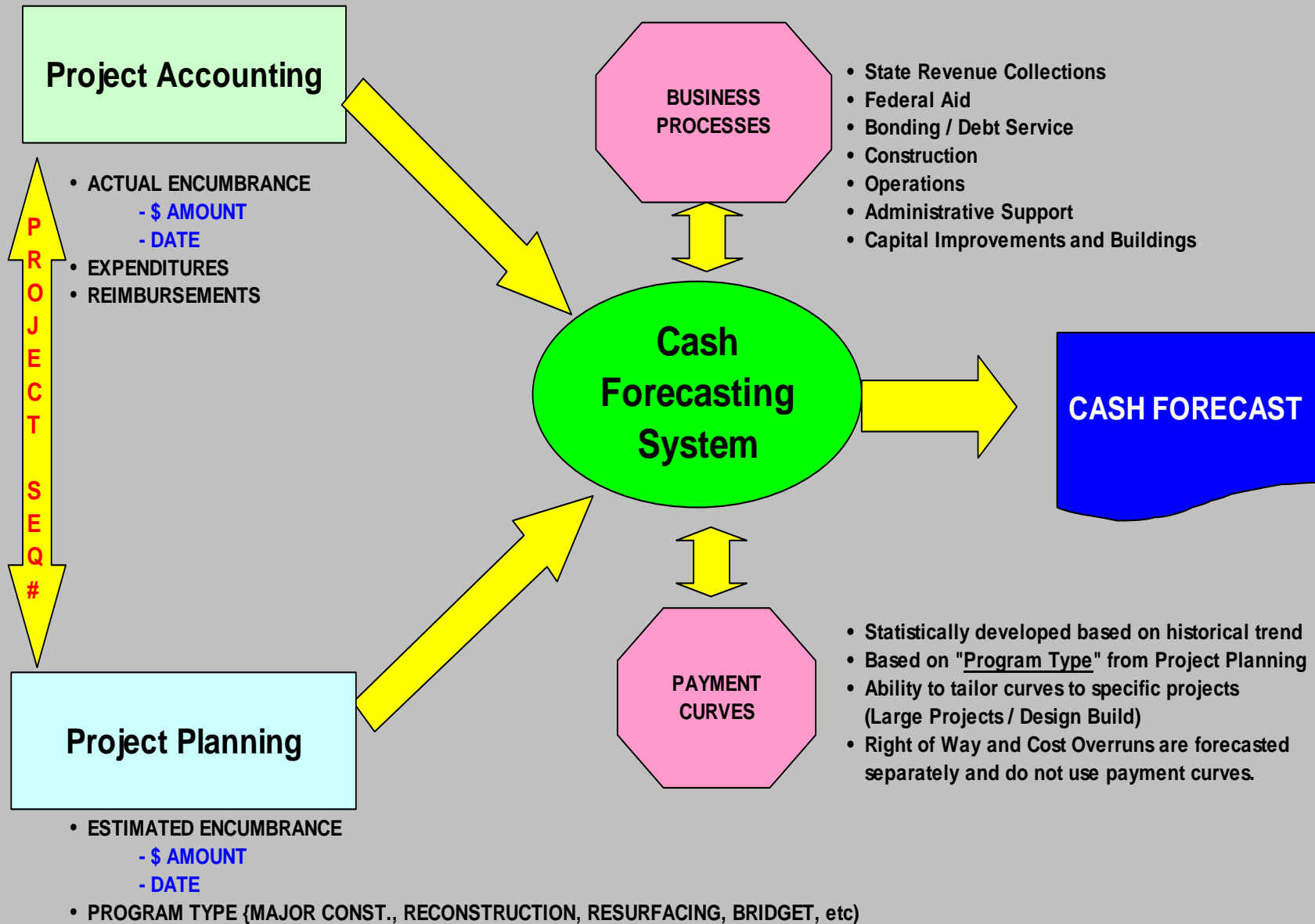
❖ **Operations & Maintenance** (approx 20%)

- Snow and Ice removal is a major component
- Primarily payroll but includes materials, supplies and equipment

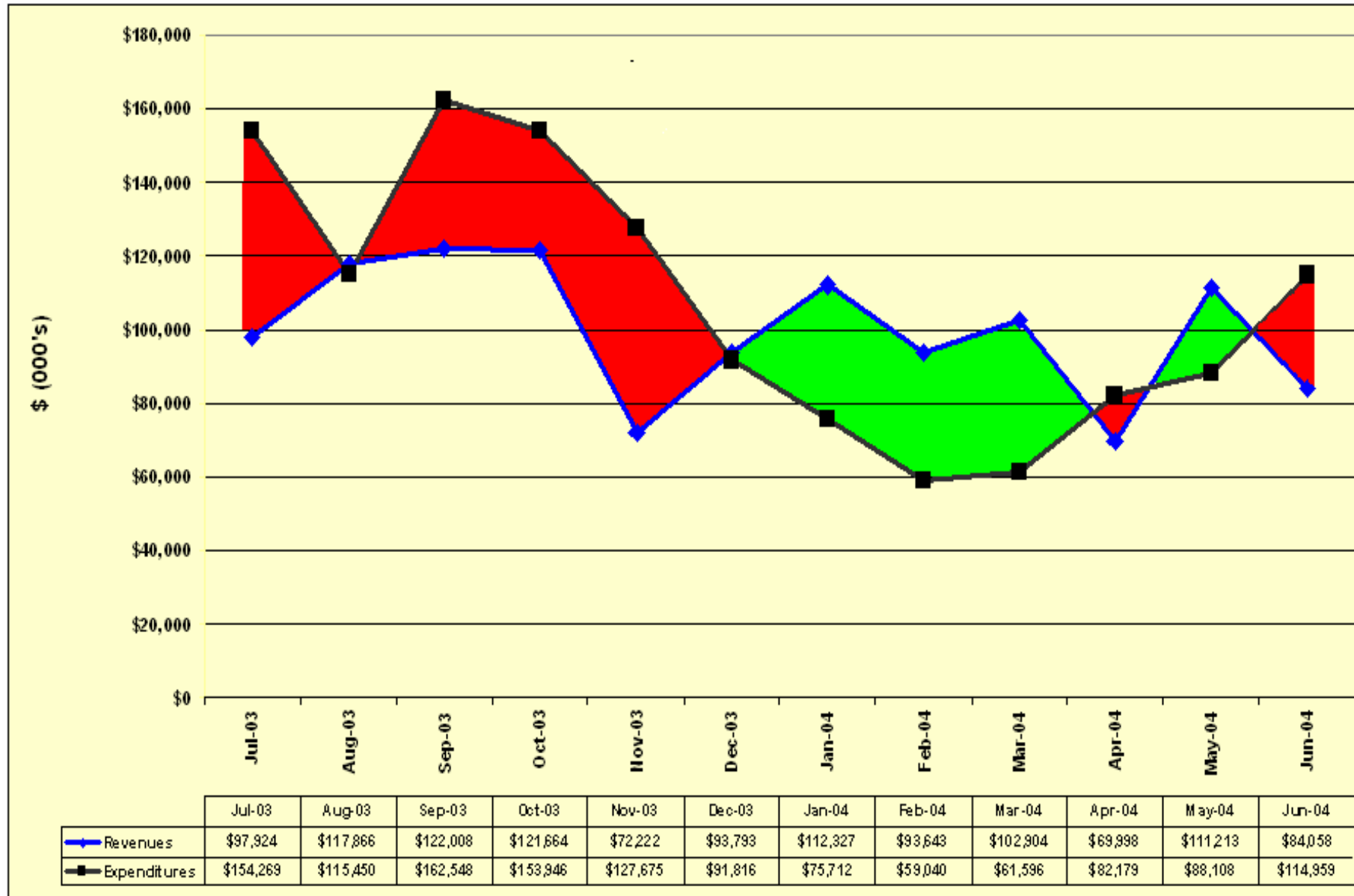
❖ **General Support and Debt Service** (10%)

- Primarily payroll, building maintenance
- Debt Service

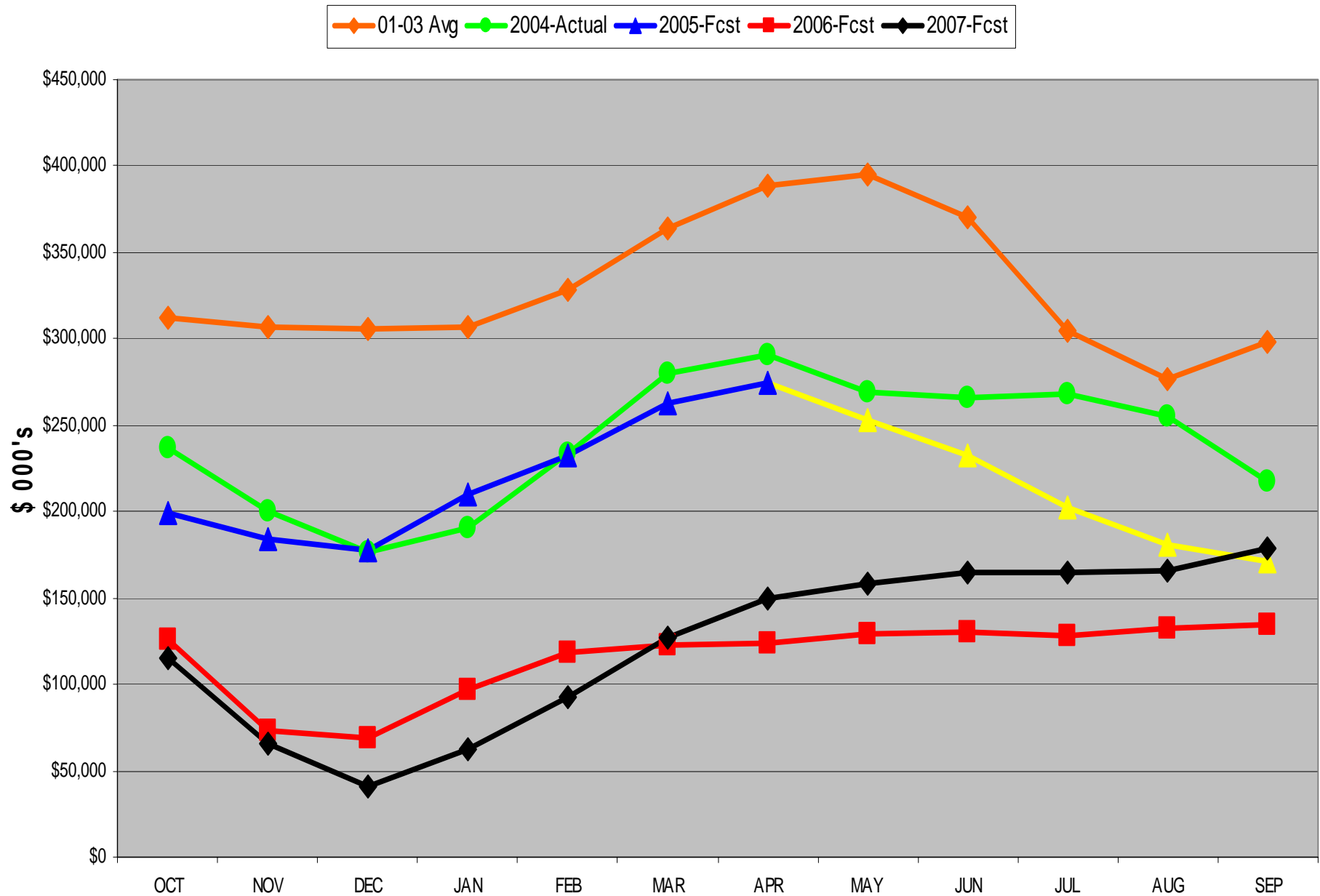
CASH FORECASTING CYCLE



Seasonality of Revenues & Expenditures



Trunk Highway - Monthly Average Cash Balance



Current Status of Cash Forecast

- ❖ **Cash Forecasting and Information Tool (CFIT) went “live” November 2004**
- ❖ **To date, our average monthly variance has been approximately 9.7%**
- ❖ **The 12 month forward forecast has fluctuated approximately 20.7% since inception**
 - **Developing reports to help us understand the cause(s) of this fluctuation**

Continuing Challenges

- ❖ **Refinement of the Project Planning System**
 - **Accurate Cost Estimates**
 - **Reducing the frequency and dollar amount of setasides**
- ❖ **Reconciliation of the construction program totals and the budget**
- ❖ **Redistributing construction payouts that were forecast but did not occur**

Next Steps

❖ **Automate Federal Aid Reimbursements**

- Forecast Federal expenditures by Federal program category
- Ensure sufficient apportionment balances and obligation authority exist

❖ **Project Finance Tracking**

- Ensure planning / programming totals remain within State & Federal appropriation
- Track and report project overruns
- Minimize time-lag for Federal Aid reimbursements

ASSESSING THE ECONOMIC BENEFITS OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S 2005-2009 HIGHWAY PROGRAM

Presented by:

Leon Hank

Chief Administrative Officer

Michigan Department of Transportation

July 13, 2005



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Ever Ask An Engineer/
Transportation Planner:

What are the benefits of your
transportation program?

- ❖ Asset Management
- ❖ VHT Savings
- ❖ VMT Savings
- ❖ Benefit/Cost Analysis
- ❖ Life-Cycle Savings



PRESERVING OUR
ROAD AND BRIDGE
INFRASTRUCTURE



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Ever try explaining these same
benefits to these people?

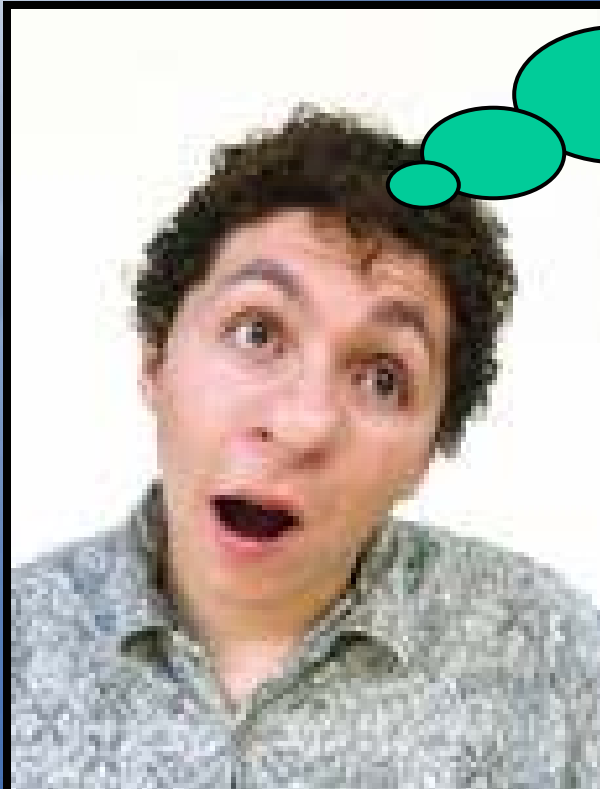


What are the economic benefits of your transportation program?

MDOT was also being asked this and similar questions by:

- State Transportation Commission
- Legislature
- Chamber of Commerce
- Contractors
- Other Stakeholders

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**Construction
Jobs**

**Spin-Off
Jobs**

**Personal
Income**

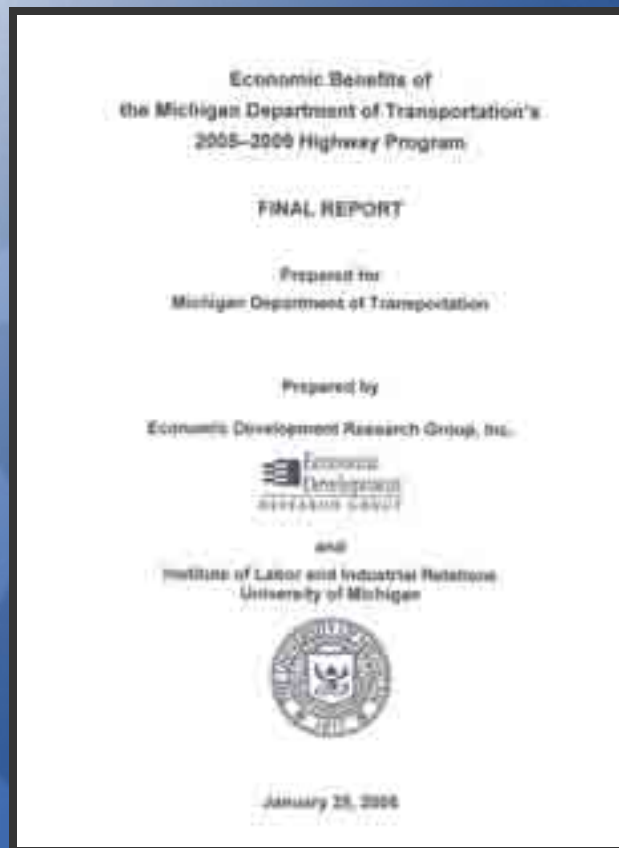


Gross State Product

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MDOT commissioned a study to assess the economic benefits of its 2005-2009 Five-Year Road & Bridge Program



➤ Study Performed By:

❖ University of Michigan's Institute of Labor and Industrial Relations

❖ Economic Development Research Group

➤ Study Cost ~\$50,000

Economic Benefits Study Methodology

- Assessed the implications on Michigan's macroeconomy
- Assessed specific benefits to Michigan's core economic sectors including manufacturing and tourism
- Assumed ~\$1.2 billion annual investment
- Study utilized a regional economic model (REMI)

Economic Benefits Study Methodology

➤ **Two key inputs were used to assess the economic benefits:**



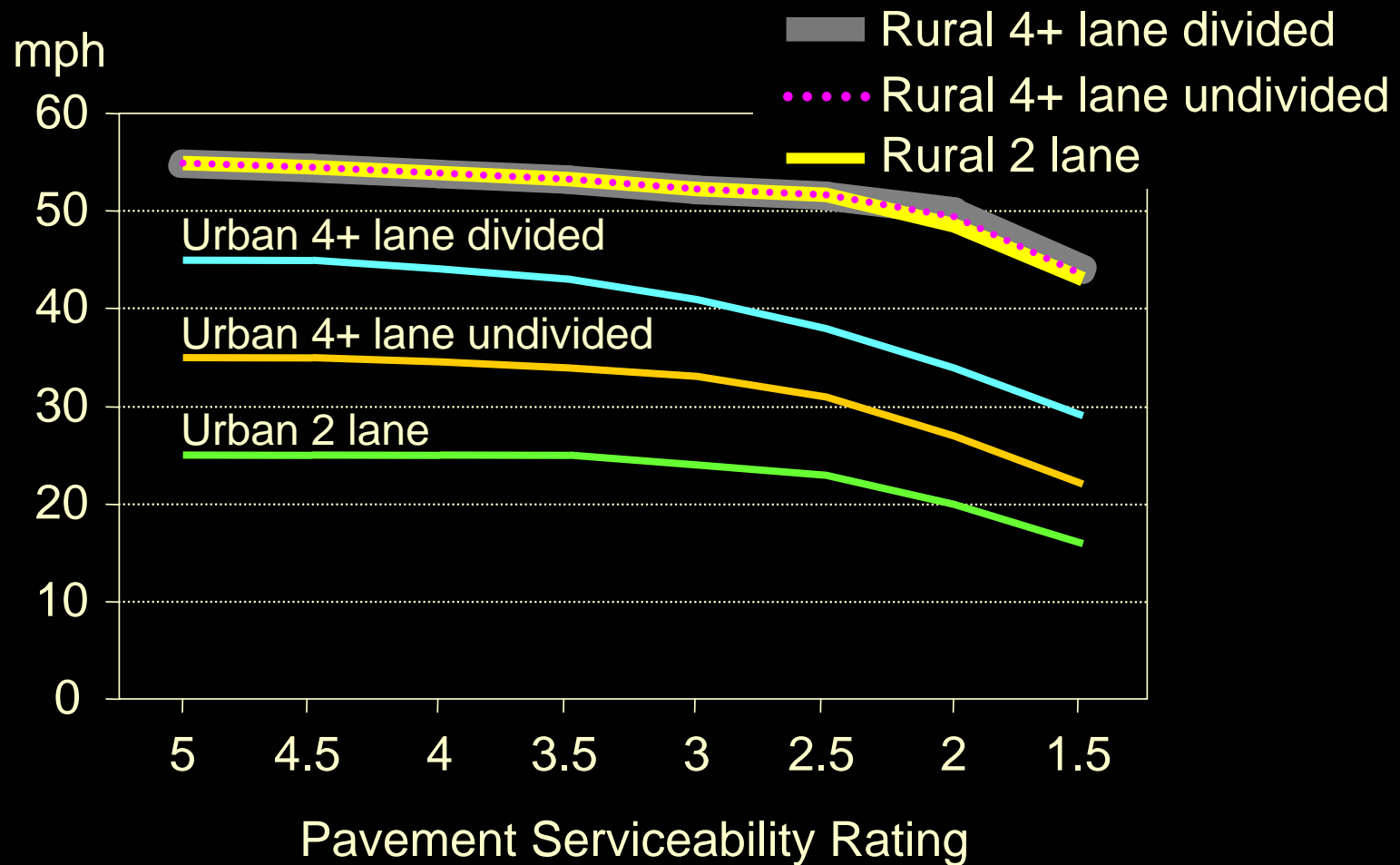
Input 1:

- Type of Work?
- Location of Work?
- Who is Doing the Work?

Economic Benefits Study Methodology

- ❖ **Input 2: Daily travel-time savings resulting from decreased congestion and improved pavement conditions**
 - **Savings were captured using MDOT's Statewide model by assessing:**
 - 1. Decreases in congestion**
 - 2. Increases in vehicle speeds associated with improved pavement conditions**

Speeds decline noticeably as ride-quality declines to “poor” condition (2 ½ mph for free-access and 5mph for limited access)



Source: Texas Transportation Institute

Economic Benefits Study Methodology

- **Results were shown in comparison with a base case**
(i.e., allowing the state's road and bridge infrastructure to wear down as a consequence of not funding MDOT's activities)
- **Results included estimates of spin-off effects in addition to the program's direct effects**
- **Direct effects + spin-off effects = Total effect MDOT's investment has on the economy**

Annual Travel-Time Savings

- **Travel-time savings (resulting from increased roadway capacity and improved pavement conditions) will provide:**
 - ✓ **Michigan households: savings worth \$21.7 million per year in 2005 and grows to \$57.6 million by 2009**
 - ✓ **Michigan businesses: a savings worth \$12 million in 2005 and grows to \$35 million by 2009**

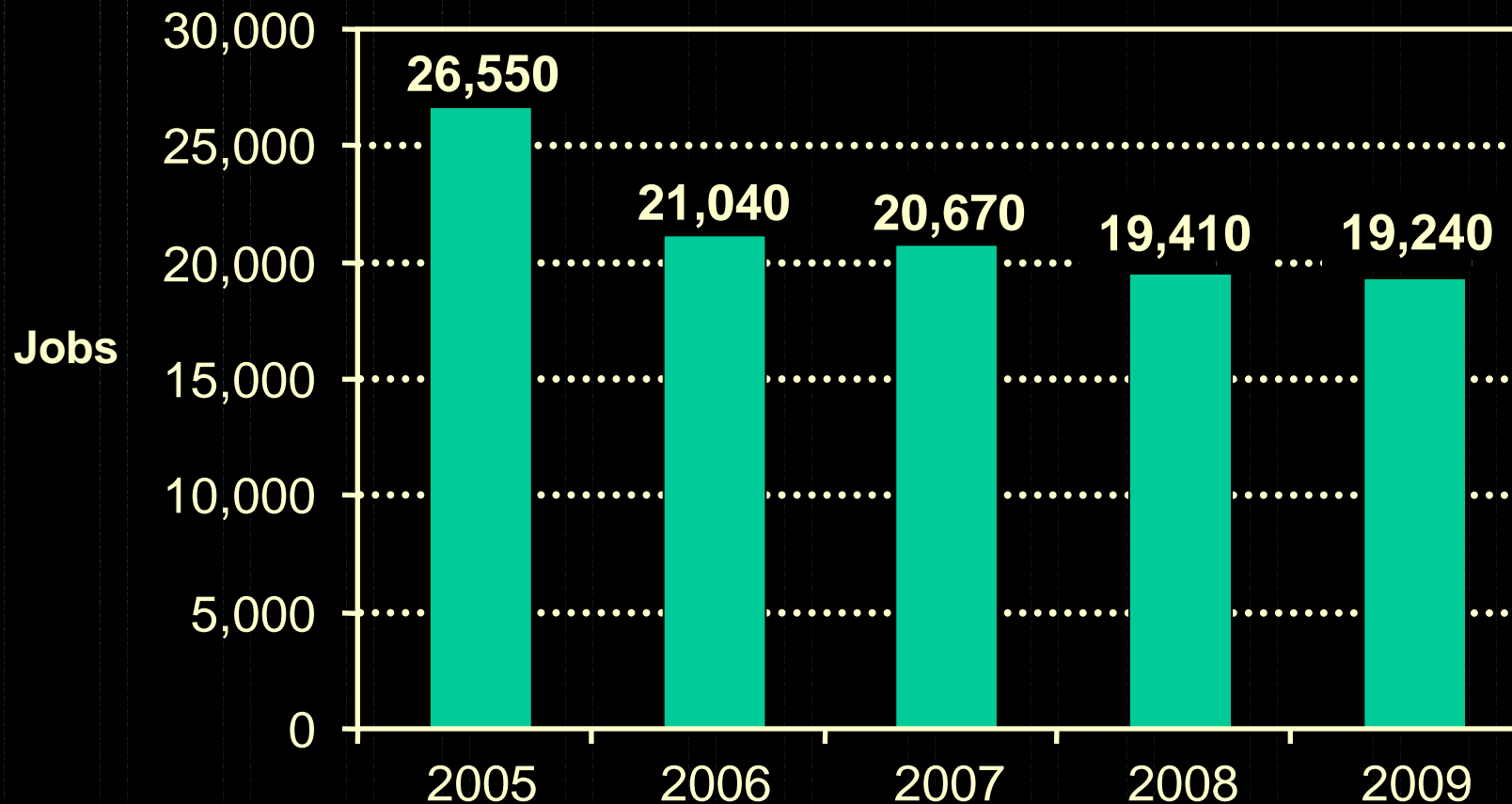
MDOT's Road and Bridge investments generate \$6.5 billion in Gross State Product over the life of the 5-year plan



Over the life of the plan, MDOT's Road and Bridge investments accumulates to provide the state \$4.2 billion in personal income



Job creation: MDOT's Highway Program will create 26,550 jobs in 2005



Of the jobs MDOT creates, approximately 60% are non-construction with a large portion consisting of technical jobs in the professional services and business sectors

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Total employment	26,550	21,040	20,670	19,410	19,240
Manufacturing	1,012	810	796	771	775
Out-of-state tourism	295	228	225	213	213
Nonmanuf. except tourism	25,243	20,002	19,649	18,426	18,252
Construction	9,881	7,807	7,396	7,006	6,818
Professional services	4,693	3,535	3,442	3,112	3,052
Business services	1,270	995	986	940	948
Trucking	137	110	109	107	109
Other	9,262	7,555	7,716	7,261	7,325

- Approximately 90% of the vehicle travel savings identified as part of this study was associated with preservation type work.
- MDOT's Preserve First Initiative is not only improving the condition of our roads and bridges, it is also having a positive impact on Michigan's economy.



Study Outcomes

Results have been favorably received by:

- **Governor Granholm**
- **Transportation Commission**
- **Legislators**
- **Transportation Stakeholders**
- **Public**



Economic Benefits Analysis Next Steps

MDOT will be analyzing:

- **2006-2010 Five-Year Highway Program**
- **Differences in the expected economic benefits between investment choices (i.e., preservation fixes vs. capacity improvement fixes, vs. safety fixes)**
- **Coordinating with SEMCOG (MPO)**

Full Study Available at MDOT web-site:

http://www.michigan.gov/documents/MDOT5yrproggameconomicbenefits_115173_7.pdf

Matt Webb, AICP

MDOT Special Projects Coordinator

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E-mail: webbma@michigan.gov

MASTER AGREEMENT WITH PUBLIC TRANSIT PROVIDERS

Sharon Edgar, Administrator

Passenger Transportation Division

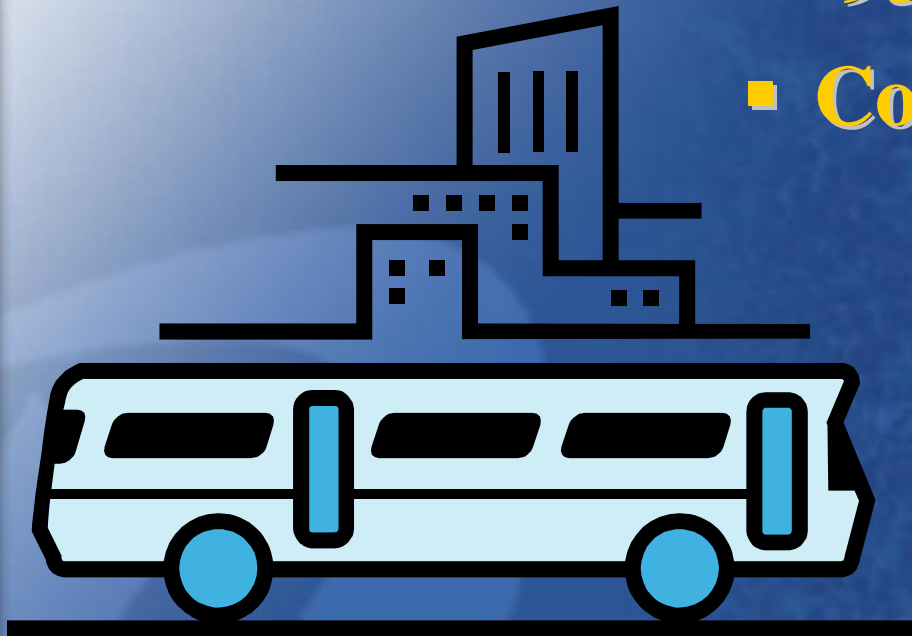
Multi-Modal Transportation Services

Bureau



Issue

- 95 public transit agencies
- Contract for each funding program – 15
 - One-year term
- Duplicative language
- Similar requirements
- Lengthy review processes



Situation



- ❖ **Time-consuming, expensive reviews**
- ❖ **Paper burdened process**
- ❖ **High cost – postage, reproduction, storage**
- ❖ **Multiple documents for operating and capital contracts**

Objective

- ❖ Customer friendly
- ❖ Single source reference document
- ❖ Multi-year
- ❖ Multi-program
- ❖ Include operating & capital programs



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Team



- ❖ MDOT core users
- ❖ Transit providers
- ❖ Contracting experts
 - Administration
 - Finance Bureau
 - Commission Audit
 - Attorney General

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Action Plan



- ❖ **Product development**
- ❖ **Communication plan**
- ❖ **Implementation**

Product Development

- ❖ Agree on timeline
- ❖ Identify funding programs
- ❖ Align program requirements
 - ❖ Create standard language
 - ❖ Ensure legal integrity
- ❖ Organize document, process
 - ❖ Agree upon measurements
 - ❖ Coordinate with users



Communication Plan



❖ **MDOT management**

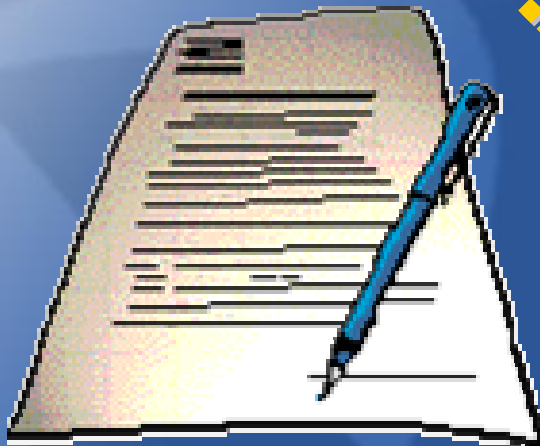
- Milestone discussions
- Draft reviews

❖ **External Customers – transit providers**

- Website postings for comments
- Discussions at meetings

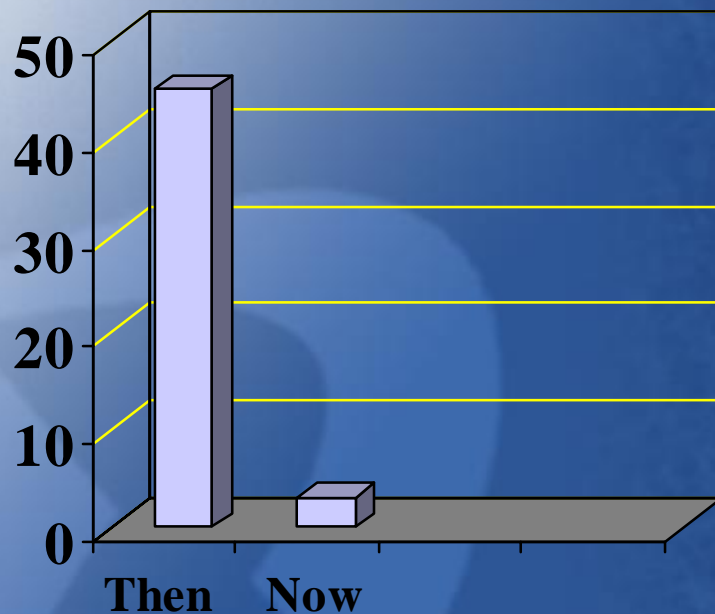
Implementation

- ❖ Advance notification of change
 - ❖ Statewide training sessions
- ❖ On-request agency discussions
 - ❖ Internal training sessions
- ❖ Master Agreements mailed in July, executed by October 1.



Measurement

Pages of Contracts



Assumes as many as 15
separate documents replaced
by one 3-page document

❖ Streamlined document

- Less paper
- Easy reference
- Standardized language

❖ Time savings

- Reduced review process
- Resolutions

Measurement



❖ Cost Savings

➤ 3-page project authorizations replace contracts

❖ Customer Satisfaction

➤ Survey

Future?

❖ **New master agreements 2006**

❖ **Creation of new team:**

➤ **Composition**

➤ **Development process**

❖ **Explore improvements:**

➤ **More programs?**

➤ **More time savings?**

➤ **More streamlining?**



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Wynell Brush, Supervisor

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Services Bureau**



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Questions & Answers

